

Vaginal microbial biomarkers for the prevention of preterm birth (Predict1000)

Research overview

Antibiotic therapy in early/mid pregnancy has the potential to prevent a significant proportion of preterm births, but the identification of women who would likely respond to this treatment (i.e. at high risk of infection-driven preterm birth) remains a challenge.

Predict1000 is an NHMRC funded study that is being conducted at King Edward Memorial Hospital with the aim of establishing a set of immunological, microbiological and clinical characteristics that will enable the prediction of infection-driven preterm birth in a cohort of 1000 Australian women at around 20 weeks' gestation.

Research highlights

The study has been through the ethical approval process and the study's research midwives are currently recruiting women into the study. In the first month of operation 32 women have been recruited and their questionnaire details and biological samples (vaginal fluid) have been collected for analysis.

The analysis will involve the generation of bacterial profiles using culture and DNA sequencing techniques, measurement of inflammatory markers and activity of bacterial enzymes that are indicators of abnormal vaginal microbiota.

Recruitment and sample collection will continue for another year, followed by collection of pregnancy outcome data prior to full analysis, integration of all measures and generation of a clinically useful predictive algorithm. It is anticipated that the results of Predict1000 will be followed by a clinical trial of the effectiveness of solithromycin for the prevention of preterm birth in high risk women.



THE TEAM

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